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**Wiki 4 – Annotated Bibliography**

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Amiri, S. (2009). The effects of information and communication technology on at risk children of low economic status: Make it-take it after-school case study. *International Journal of Education and Development Using Information and Communication Technology. 5(*3), 1-7.

Shahram conducted a study based on the idea of digital literacy and the effects on low economic status children. Shahram questioned if providing low economic status children with computer technologies would impact their long-term academic performance. Shahram questioned if digital literacy would result in an increase in participation in future academic learning. Shahram used the Make It-Take It After-School (MITIAS) program to conduct this study. The MITIAS program was organized as a four-week session with two phases, each lasting two weeks. The first two weeks consisted of teaching students how to use the computer technologies, and the second two weeks consisted of hands-on activities. This case study highlighted the issue of the digital divide, which is the gap between socio-economic levels in regards to their experience and expertise in the use of technology. Shahram found that through the use of digital technologies, students developed critical analysis and cognitive skills. This case study proves that technology can result in an increase in academic performance and willingness to participate for low-economic status students.

Chatel, R. (2002). New technology, new literacy: creating a bridge for English language learners. *The New England Reading Association Journal,* *38*(3), 45-9.

Regina Chatel discusses the transformation of literacy and describes literacy as a dynamic process defined by change. Chatel identifies four types of literacy- functional, academic, critical, and technological. Chatel describes the process of becoming literate extremely complex, especially for ESL students learning in a second language. She discusses how the use of technology provides ESL students with motivation to learn and results in active engagement. She describes how the use of technology promotes collaborative learning and good behavior. Chatel conducted interviews and observations with eight classroom teachers and four ESL teachers. These interviews described how teachers used technology to support and educate both culturally and linguistically diverse students. There were consistent findings or themes found among the eight classroom studies. One significant theme found was that technology creates a cultural, social, and linguistic bridge for diverse students who are learning English. Overall, the findings implied that students using technology to learn the English language tend to develop multiliteracy skills.

Coyle, Y., Yañez, L., & Verdú, M. (2010). The impact of the interactive whiteboard on the teacher and children’s language use in an ESL immersion classroom. *System*, *38*(4), 614-625. doi:10.1016/j.system.2010.10.002

This study focused on the impact of interactive whiteboards on an ESL classroom. One third grade classroom was studied during two 50 minute lessons using the interactive white board (IWB), in which researchers transcribed and observed the interactions within the classroom. The non-native English speakers were more active in tactile learning. The native English speakers were more active in verbal interaction. The study found that the IWB has the potential to have a very positive impact on classroom interaction. Students can visualize what they are learning, and focus their attention on the content and tasks on screen. It is especially promising for ESL students in comprehension and promoting learning through verbal interaction, including both listening and talking. However, the main issue of concern was the lack of teacher education in terms of the IWB. The teacher must understand how to use such a tool to build upon the ESL tactile abilities, and promote their verbal interaction skills.

Green, T. (2005). Using technology to help English language students develop language skills: a home and school connection. *Multicultural Education*, *13*(2), 56-59.

In this article, Green discusses the needs of EL (English Language) students in acquiring and learning the English language. Green emphasizes that EL students need a variety of language experiences that encourage speaking, reading, writing, and hearing English. He believes that computers are an excellent supplemental tool in teaching the language, and offer the students a number of language experiences. He believes computers and technology promote verbal interaction, where students learn how to communicate with one another. He based this finding on a study conducted by Liaw in 1997, which tested students learning outcomes through the use of computer-books. Green also supports the idea that computer assisted instruction is effective in teach vocabulary, as well as core subjects such as reading and writing. Green finds that using computers in school encourages students to extend this learning experience into their homes. He believes that computer assisted teaching promotes a positive home-school relationship, which encourages parent- involvement, and provides a holistic approach for students learning the English language.

Lee, R. (2006). Effective learning outcomes of ESL elementary and secondary school students utilizing educational technology infused with constructivist pedagogy. *International Journal of Instructional Media*, *33*(1), 87-93**.**

In this article, Rebecca Lee of Florida Atlantic University, addresses how effective ESL education is when instruction is based on a combination of constructivism and technology. Lee bases her observation and research on a study conducted by National Research Center on English Learning and Achievement in 1999. The researchers selected two teachers from Indian River Central School District, New York to participate in the study. They studied how students responded to different types of software. The study implicated that the use of technology infused instruction promoted both collaborative and autonomous learning. It encouraged ESL students to not only think, but to create and visually portray their work. Lee found that the technology infused learning environment resulted in second language acquisition, as well as an increase in literacy and technology skills. Lee believes that in order participate in social, economic, and political aspects of life, individuals must have proficient technological skills. Lee also discussed that not all schools have access to technology-teaching tools, and in which case, teachers must find alternatives. Another issue discussed is the concept of the digital divide, and how teachers must also learn how to use such technology, to ensure that they provide the students with best education possible.

Lebens, M. M., Graff, M. M., & Mayer, P. P. (2009). Access, attitudes and the digital divide: children's attitudes towards computers in a technology-rich environment. *Educational Media International*, *46*(3), 255-266. doi:10.1080/09523980903135467

This study focuses on the issue of the digital divide. The digital divide refers to the ability to use and benefit from computer technologies based on the socio-economic level of individuals. According to this study, the digital divide is comprised of three major factors; motivation, possession, and skills. This study addresses the complex relationship between technology and socioeconomic backgrounds. The purpose of this study is to investigate the attitudes towards computers from students with different socio-economic statuses. The findings imply that children from low socio-economic households understand and recognize the importance of computers and information and communication technology skills. However, these students also feel threatened by the use of the computer and cautious about using the computer. These findings imply that simply placing ICT resources in schools is not going to narrow the digital divide.

Long, S. (2008). Examining the learning experiences of secondary non-English speaking background students in the mainstream English classroom: informing teaching practice for improved educational outcomes. *International Journal of Learning*, *15*(6), 263-270.

Sarah Long, of All Saints Anglican School and Griffith University, Australia conducted a small scale qualitative study to examine the learning experiences of non-English speaking students. The purpose of the study was to identify academic and social difficulties that impact non-English speaking background students in the mainstream English classroom. This study focused on students in secondary school. Long used qualitative measures including questionnaires, interviews, and observations, to examine both student and teacher experiences. Long found that ESL students struggled with the content topics, as they often were based on cultural experiences that ESL students could not relate to, or found boring. Students also suffered from performance anxiety, and feared speaking in front of native English-speaking peers. Students described speaking as humiliating, embarrassing, and too much pressure. Other issues that negatively impacted ESL students included language barriers and the delivery of the content.

Philips, M. (2008). It Makes Teachers Touchy. *Newsweek*, *152*(12), 10.

This article discusses how about 16 % of the United States classrooms have interactive white boards (IWB). Phillips refers to the IWB as the internet-age chalkboard. While the data reporting the efficacy of the IWB is inconclusive at this point in time, it does seem very promising. The recent studies have found that the interactive boards have resulted in an increase in attendance and participation in the classroom. There are also findings that support the idea that the use of the IWB has resulted in fewer disciplinary actions, as the students are no longer bored. However, the IWB is a very expensive tool, costing about $3000 per board. Many teachers are intimidated by the IWB, and lack the knowledge and training in using the IWB effectively. The teachers must use this technology in their classroom effectively, so the IWB is not viewed as a waste of the educational budget.

Powell, K. C., & Kalina, C. J. (2009). Cognitive and social constructivism: Developing tools for an effective classroom. *Education*, *130*(2), 241-250.

This article discusses the usage of constructivism in the classroom, and how the effectiveness of the classroom is dependent upon the strategies used. The ideas of constructivism and social constructivism are defined and compared. Constructivism, founded by Piaget, is defined as a theory in which ideas are formed through a more personal process. Social constructivism, founded by Vygotsky, emphasizes that ideas are constructed through social interaction. Both theories support inquiry based learning, and believe that children learn by building on their existing knowledge. They both support the idea that children must construct their own knowledge and meaning. However, the theories differ on the development of language. Cognitive constructivism believes thinking precedes knowledge; however social constructivism believes language precedes thinking and learning.

Roblyer, M. D., & Knezek, G. A. (2003). New millennium research for educational technology: A call for a national research agenda. *Journal of Research on Technology in Education*, *36*(1), 60-71.

The purpose of this study is to understand the rationale for using computers-based tools and technology in educational instruction. The high costs of maintaining technology and the low use of the technology in the classroom calls for greater research in understanding how such tools improve teaching and learning. The study identifies different topics and issues to be explored further, as well as guidelines to conduct such research. The study found most articles discuss teacher-training and the evaluation of local programs. However, little research is done to understand why students should be using technology? The research performed does not help to validate the high costs of technology- based educational tools. The National Education Technology Plan calls for researching technology in ways that help the public to understand the true benefits of technology infused education.

Smith, P. A., & Owens Jr., E. W. (2010). Examining barriers to integrate technology in elementary teacher education programs. *Journal of Technology Integration in the Classroom*, *2*(1), 57-74.

The purpose of this study is to examine the barriers teachers face in integrating technology into elementary education. It has become a major focus to implement technology, as technology provides students with visual learning and interaction, while also promoting higher level thinking. Technology has become a major focus in improving learning outcomes, however, technology continues to be lacking in elementary education due to a number of barriers. The first barrier noted was that teachers lack opportunities to practice technology in their teacher-education programs, both in the classroom and in field experience. A second barrier found was that teachers find other priorities in the classroom compete with time to implement technology. This implies that teachers emphasize teaching what the kids are tested on, rather than spending time on technology. Lastly, this study found that teacher-educators lack the training and time to implement technology in education programs. This implies that the education preparation programs need to redirect their focus on technology in education.

Spezzini, S. (2010). Effects of visual analogies on learner outcomes: bridging from the known to the unknown. *International Journal for the Scholarship of Teaching & Learning*, *4*(2), 1-30.

Spezzini studied how effective visual analogies are on learning outcomes for a graduate class entitled, Phonology for ESL teachers. The purpose of this study was to understand how visual analogies can be used to reduce anxiety, and ultimately create a bridge from the known to the unknown for students. Abstract ideas were taught through the representation of concrete images. Spezzini measured this study through the use of course evaluations, exams, and electronic surveys. This study found that use of visuals had a positive effect on satisfaction, learning, and impacted teacher pedagogy. The purpose of education classes is to model how to teach. Through this study, pre-service and in-service teachers learned how visuals and visual analogies help students understand complex concepts, such as ESL phonology, through first-hand experience. The students were able to make connections after studying visuals, and understand how to teach ESL students the English language through visual analogies. The visuals helped the graduate students to reduce anxiety and become more comfortable with the concepts. The future teachers hope to use this method to teach ESL students, and help to reduce their stresses, and allow the students to learn.

Wood, R., & Ashfield, J. (2008). The use of the interactive whiteboard for creative teaching and learning in literacy and mathematics: a case study. *British Journal of Educational Technology*, *39*(1), 84-96. doi:10.1111/j.1467-8535.2007.00703.x

The purpose of this study is to indentify how the interactive whiteboard (IWB) can enhance teaching and learning. The study found that the interactive white board is a very special ICT tool as it provides interaction, speed, capacity and range of information and activities. The study indicates that the level of skill and professional knowledge of the teacher plays a major part in the effectiveness and usefulness of the IWB. The teacher must facilitate the students’ creativity when interacting with the technology. This study found that the IWB supports whole-class interactive learning, and is an excellent way to integrate technology and creativity into the classroom. The students and teachers were observed and interviewed about the use of the IWB in lessons. It was found that the IWB captured and held the children’s attention, enabled concentration, and provided motivation to learn. It was also noted that the resources on the IWB provided good visuals for the “visual” learners.

Wen-chi Vivian, W., & Marek, M. (2010). Making English a “habit”: Increasing confidence, motivation, and ability of EFL students thought cross cultural, computer assisted interaction. *Turkish Online Journal of Educational Technology*, *9*(4), 101-112.

This study focuses on understanding how confidence, motivation, and ability of EFL students is affected by the use of technology in instruction. This study highlights the usage of video-conferencing with native speakers, in order to enhance the EFL students’ learning experience. The findings imply that ability is greatly impacted by the enjoyment of the learning experience. When students interacted in the English language, the students became more comfortable with the language and their ability to communicate. The success of the interaction motivated the students to use the language and practice the language. This study emphasizes the importance of student centered active learning, including interaction with native speakers and instruction infused with technology.

Zha, S., Kelly, P., & Park, M. (2006). An investigation of communicative competence of ESL students using electronic discussion boards*. Journal of Research on Technology in Education*, *38*(3), 349-67.

In this article, Zha, Kelly, and Park of the University of Michigan, discuss how ESL language education has changed over the past few decades. They believe that the purpose of language is to communicate and to interact. They discuss the emphasis of communicative competence in ESL education, and how improving this competence has become the focus of language instruction. Zha, Kelly, and Park describe the impact of technology on language instruction, and how innovative technology has resulted in computer mediated learning. They conducted a study which focused on the use of electronic discussion boards with elementary ESL students. They analyzed students’ communicative competence in a computer-mediated communication (CMC) environment by studying 956 messages posted by 28 ESL students. This study took place over six-week period and consisted of both qualitative and quantitative measures. The findings implicated that the use of the electronic discussion boards improved students’ ability to use language for social purposes. The students’ participation rates and the use of language for personal expression increased. Students also experienced peer-assisted learning, in which students would improve or correct their language after viewing their peers. Overall, this study implies that technology tools, such as the electronic discussion board, produce a learning environment, which promotes communicative competence.